

Planning Update

San Luis Valley National Wildlife Refuge Complex: Alamosa, Baca, and Monte Vista National Wildlife Refuges

Issue 2, January 2012



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Sandhill cranes can often be heard during their spring and fall migration through the San Luis Valley.

Alternative Workshops Scheduled

Last spring, we, the U.S. Fish and Wildlife Service (Service), held several scoping meetings at which we heard from many of you about your ideas and concerns regarding the future of Alamosa, Baca, and Monte Vista National Wildlife Refuges managed together as the San Luis Valley National Wildlife Refuge Complex (refuge complex). Information we gathered during the scoping process was summarized into a scoping report, which is available on our project Web site.

Now we would like to invite you to review four draft management alternatives that we developed for the comprehensive conservation plan (CCP) process. These draft alternatives are based on the purposes and significance of the refuges, project goals, our legal mandates, and the comments we received during the scoping period.

We are pleased to present the draft alternatives in this update and during the upcoming workshops to be held

January 23–25, 2012. The workshops will involve a brief presentation of the alternatives, followed by a discussion.

Each of the draft alternatives presents a different approach for future management, with a varied focus on wildlife and habitat management scenarios and public uses. No decisions have been made nor have we completed the analysis phase of the environmental impact statement (EIS).

We appreciate your continued involvement in the CCP process and look forward to receiving your input on the preliminary management alternatives. The deadline for comments is February 24, 2012.

During the scoping process, we talked about the potential for a landscape-level conservation initiative consisting primarily of conservation easements in the San Luis Valley. We have new information about the schedule for the land protection plan that we would like to share with you. Whether you decide to send us comments by letter, email, or fax, or you choose to join us at an

upcoming meeting, we look forward to hearing your views.

Michael Blenden
Project Leader

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Alternatives Development

The Service's planning process requires that we look at a range of reasonable alternatives for managing the refuge complex. By gathering public input on the draft alternatives before the draft CCP and EIS is written, the ideas and concerns of citizens, stakeholder groups, and Native American tribes are considered. Once the draft plan is published (winter or spring 2013), there will be another opportunity to provide input before the selection of a preferred alternative in the final CCP and EIS (summer 2014).

Three action alternatives and the no-action alternative are described in this planning update. For each alternative, there is a concept statement or theme that describes the approach used to achieve the vision and goals of the project. The no-action alternative is based on how the refuge complex is managed currently and serves as a baseline for comparing the resource conditions and public uses prescribed by the other three alternatives.

Under each alternative concept, the actions for different categories are described. The categories were derived from the significant issues that were identified during scoping (see below). These actions focus on what future conditions and uses should occur. At this stage in the process, there are fewer specific details of how they should be achieved. As an example, an alternative may describe the use of a management tool such as prescribed fire or grazing, but specific details are still lacking. These details will continue to be refined as we develop objectives and strategies for the alternatives or in future step-down plans.

Significant Issues

Based on the qualities, issues, and recommendations identified in the scoping comments, as well as Service mandates and policies, we organized all of the issues into seven significant topic headings and a number of subtopics that will be addressed in the CCP and EIS:

- habitat and wildlife management
- water resources
- landscape conservation and protection



The Service participates in many partnerships like the crane festival.

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- visitor services
- partnerships and operations
- cultural resources and tribal coordination
- research, science, and protection of the physical environment

More information about the subtopics and issues were selected, including information about the public involvement process, is on our Web site (refer to contact information).

Proposed Action

The Service's planning policy requires that one of the alternatives be identified as the proposed action. This is the alternative that we believe best fulfills the refuge purposes and the mission and goals of the National Wildlife Refuge System (Refuge System). Despite having identified a proposed action, we have not made any final decisions about any alternative. We are soliciting input about the approaches we have described in this planning update. For example, what are your thoughts about the alternative approaches? Have we captured a range of reasonable alternatives?



Several cooperating agencies are assisting the Service in the planning effort.

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2012 Alternatives Workshops

- **Alamosa, Colorado**
January 23, 6:30–8:30 p.m.
Alamosa County Building
8900 Independence Way,
Room 108
719 / 589 4848
- **Monte Vista, Colorado**
January 24, 6:30–8:30 p.m.
Monte Vista COOP
Community Room
1901 E. Highway 160
719 / 852 5181
- **Moffat, Colorado**
January 25, 6:30–8:30 p.m.
Moffat School
501 Garfield Avenue
719 / 256 4710

Although we don't have the space to convey every detail that we have thought about, we are interested in any other suggestions you might have to improve the alternatives.

To learn more about the ideas presented in this planning update, we encourage you to attend one of the public meetings at the dates and times listed above or to submit your comments in writing. Refer to the contact information on the last page for our physical and email addresses for sending in your comments. While we are always interested in hearing your suggestions, to incorporate your ideas as we start writing the CCP and conducting the environmental analysis, the deadline for comments on alternatives is February 24, 2012. We will summarize what we have heard and post the summary to our Web site.



Habitat and wildlife management is a significant issue in planning.

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Common Definitions

We frequently refer to several terms in the CCP process that define how national wildlife refuges should be managed under the Refuge System. More information about these terms can be found at www.fws.gov/policy/manuals (600 Land Use and Management Series).

Wildlife-dependent Recreational Uses

Six types of recreational activities have been identified by Congress as the priority public uses: hunting, fishing, wildlife observation, photography, environmental education, and interpretation. Other uses, such as horseback riding or bicycling, are not priority uses but may facilitate wildlife-dependent recreation if they are found to be appropriate and compatible.

Appropriate Uses

Proposed or existing uses must meet at least one of the following: is a wildlife-dependent recreational use; contributes to fulfilling refuge purposes, the Refuge

System mission, or goals and objectives outlined in a CCP; or the refuge manager has evaluated the use and found it to be appropriate.

Compatible Uses

All wildlife-dependent recreational uses or any other uses (i.e., economic uses) of a national wildlife refuge must not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the refuge.

Biological Integrity, Diversity, and Environmental Health

In managing the Refuge System, Congress directed the Service is to ensure that its biological integrity, diversity, and environmental health are maintained for the benefit of present and future generations of Americans.

Economic Uses

National wildlife refuges are administered for wildlife conservation under the provisions of the National Wildlife Refuge Administration Act of 1966 as

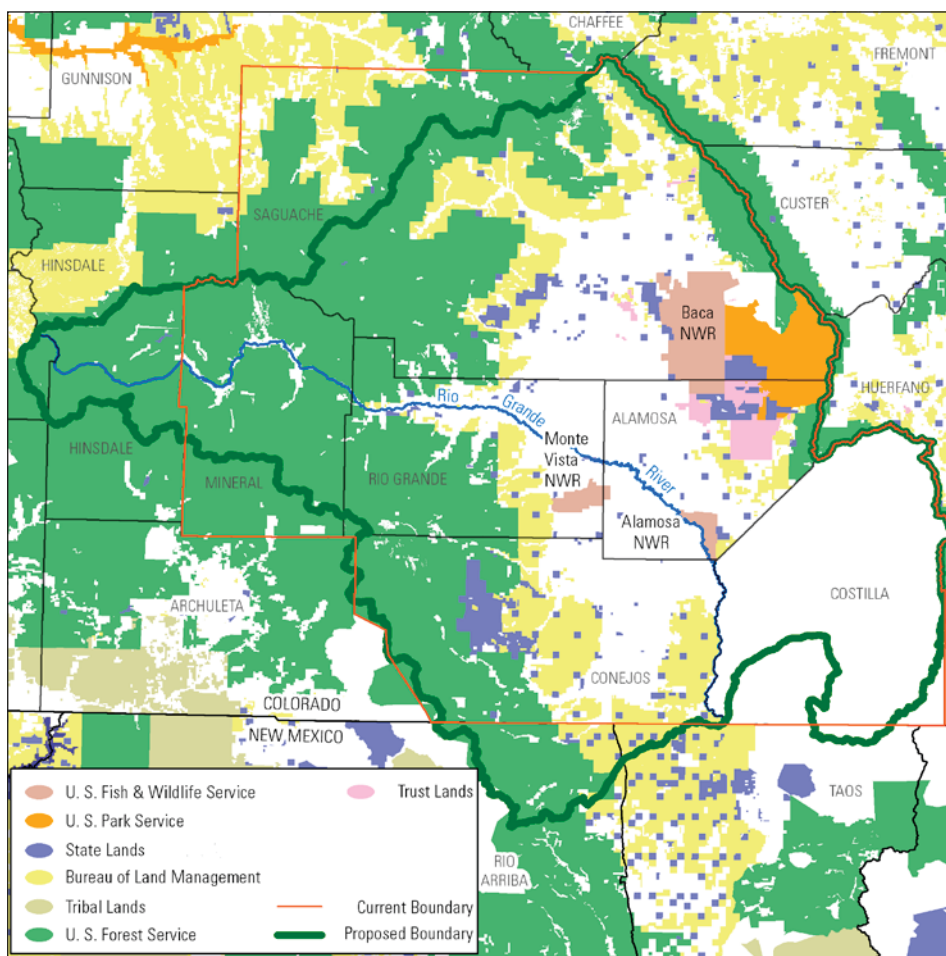


Haying is an economic use of a refuge that needs to be evaluated for compatibility with refuge purposes.

amended by the Improvement Act of 1997. Economic uses like livestock grazing or haying must conform to Service policies, which are different than practices used on other public lands with multiple-use mandates. When grazing or haying are used on Service lands, the uses must be prescribed in plans to meet specific wildlife or habitat objectives, and the uses must be compatible with the purposes of the refuges.

Land Protection Planning

During scoping we discussed our intention to combine the CCP process with the land protection planning effort for the proposed San Luis Valley Conservation Area. Because the CCP process will take several more years to complete, the land protection plan will be split from the CCP to allow the Service to take advantage of opportunities to work with local landowners to strategically protect important resources in the San Luis Valley that otherwise may not be available in the future. The San Luis Valley Conservation Area would consist mostly of conservation easements with limited fee title. More information about the land protection planning effort will be discussed at the upcoming workshops.



Location of San Luis Valley refuges (NWR on map) within the San Luis Valley Conservation Area, as shown with current and proposed boundaries.



The proposed conservation area seeks to protect important habitat resources, such as those along the Rio Grande.

Alternative A—No Action

Few changes would occur as wildlife populations would be conserved through the management of water and habitat. There would be few additional public uses outside of what already occurs on Alamosa and Monte Vista Refuges. Existing partnerships would be maintained. Land protection efforts would be restricted to the acquisition of inholdings within existing refuge boundaries.

Habitat and Wildlife Management

The Service would manage wetland areas with an emphasis on waterfowl production at Monte Vista and Alamosa Refuges. Wet meadow acreage would be maximized to provide for a variety of waterbirds on Baca Refuge. Riparian and upland habitats would be conserved for migratory birds. Agricultural production of small grains for sandhill cranes would continue on Monte Vista Refuge.

There would be few changes made in managing big game populations. Elk numbers on the east side of the San Luis Valley are estimated at 4,000–6,000. Population control would be limited to dispersal methods, agency controls, and public distribution hunts on former State lands on Baca Refuge, pending the adoption of an interim elk management plan.

Populations of threatened or endangered species or species of concern such



Use of ground water would continue to provide habitat for wildlife.

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as the southwestern willow flycatcher, Gunnison prairie dog, Rio Grande chub, and northern leopard frog would be protected. No other restoration effort for native species would occur unless new listing information under the Endangered Species Act dictated otherwise.

The existing arrangement with The Nature Conservancy for bison management on former State lands would be phased out. Bison would not be introduced or used as a livestock grazing tool.

The Service would continue to use prescriptive livestock grazing, haying,

and grain production as tools for managing habitats in the refuge complex, since livestock grazing and haying are economic uses. They would be used prescriptively to meet specific habitat and wildlife objectives. Invasive and noxious weeds would be controlled at current levels using chemical, mechanical, or manual methods or through the use of prescriptive livestock grazing.

Prescribed fire would continue to be used at existing levels, which are unpredictable and infrequent. The Service would follow wildland-urban interface guidelines, recognizing that mitigation projects within the refuge complex rank too low to expect funding from traditional sources in the foreseeable future.



The existing arrangement for bison management would be phased out.

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Water Resources

The Service would retain its ability to use water. Ground water use would continue, except as modified by changing regulations and policies (all depletions to streams from ground water use will need to be replaced with surface water owned by the United States or purchased for this purpose). All refuges have some ground water rights that are junior to



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Wetlands would be managed with an emphasis on waterfowl production.



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Changes in water regulations would have impacts on all three refuges.

senior water rights and will have to be augmented in the near future.

The Service would continue to lease water to Baca Grande Water and Sanitation District and would comply with the mitigation requirements for wetlands replacement under the Closed Basin Project. The existing irrigation water rights and diversion network would be maintained. Water quality would be monitored at minimal levels. Poor water quality would be mitigated where feasible.

Landscape Conservation and Protection and Wilderness Review

Any new land protection would be restricted to acquiring inholdings within the refuge complex and would be managed consistent with existing habitat and wildlife management practices. No refuge complex lands would be recommended for wilderness protection.

Visitor Services

Waterfowl and small game hunting would continue on Monte Vista and Alamosa Refuges, but there would be no public hunting of elk on any of the refuges other than the distribution hunts on Baca Refuge.

The auto tour routes on Alamosa and Monte Vista Refuges along with the existing nature trails would provide some viewing opportunities. Public access (i.e., trails or a tour route) would not be established on the Baca Refuge.



Kids' fishing day on Monte Vista Refuge.

The visitor center on Alamosa Refuge would operate on a part-time basis. Few environmental education opportunities would be offered outside of the kids' crane festival in the fall or activities such as the kids' fishing day.

Partnerships and Refuge Operations

Existing partnerships with a variety of agencies and organizations and current refuge management operations would be continued to the highest level possible with available funding. There would be few new funding resources available to implement new programs.

The Service would coordinate with adjacent landowners to reduce potential conflicts. In addition, the Service would work with owners of separated mineral rights to curb impacts to the surface estate or other associated resources in the refuge complex.

The Service would coordinate hunts with Colorado Department of Parks and Wildlife to limit game damage on lands adjacent to Baca Refuge. The use of economic practices (haying, livestock grazing, and others) would be managed through special use permits and would conform to Service policies.

The Service would continue to inventory, maintain, and rehabilitate existing real property, including those with historical significance. Where practical, unneeded structures that are not historically significant would be removed. In addition, the Service would continue to fence areas such as Baca Refuge, retrofit existing fencing to ensure compatibility with wildlife, and remove unnecessary fencing.



Deadman Camp is a historic structure found on Baca Refuge.

Cultural Resources and Tribal Coordinations

Surveys for cultural resources or structure assessments for historic buildings would continue in response to ground-disturbing actions. Avoidance of impacts to significant resources would continue. There would be continued monitoring and law enforcement for sensitive and significant resources. As needed, the Service would consult with the State and tribes and adhere to other cultural resource laws.

Research, Science, and Protection of the Physical Environment

The Service's inventory and monitoring program would continue within existing funding levels. The Service would work with the U.S. Geological Survey or other entities in conducting research on climate change or other issues.



Sandhill cranes rest and feed for several weeks to replenish important fat reserves during their long spring and fall migrations.

Alternative B—Wildlife Populations, Strategic Habitat Restoration, and Enhanced Public Uses (Draft Proposed Action)

The Service would increase and prioritize water and habitat management actions using strategic habitat conservation principles (a structured, science-driven, and adaptive approach) in determining where and how to benefit native fish, wildlife, and plant species, particularly migratory birds. Compatible wildlife-dependent public uses would be enhanced and expanded to include all three refuges (Baca Refuge would be opened). Partnerships that facilitate protection, restoration, and conservation of water resources together with public education would be embraced. Landscape conservation and protection would be promoted in the upper Rio Grande watershed.

Habitat and Wildlife Management

The Service would manage wetland areas to achieve varied wetland types and conditions and to support a broad diversity of migratory birds. In some places riparian areas would be restored to improve habitat conditions. Upland habitats would be actively managed using prescribed fire and grazing and other tools.

Refuge management practices would include public hunting to complement State efforts to reduce the elk population(s) to levels that sustain healthy native plant communities on the refuge complex. The Service would



Restoration of riparian areas on Baca Refuge would be a priority.

work with other partners in managing and monitoring elk populations across the landscape.

Habitats for native species such as the Gunnison prairie dog, northern leopard frog, pronghorn, and others would be restored and enhanced where practical. Similarly, habitat for threatened, endangered, or other species of concern would also be improved (e.g., enrich riparian habitat for southwestern willow flycatcher or secure backup water sources and refurbish habitat for Rio Grande sucker and chub).

As with alternative A, the existing arrangement with The Nature Conservancy for bison management on former State lands would be phased out. The Service would cooperate with others on bison research. Prescriptive livestock grazing and haying along with grain production would be used to manage habitats on the refuge complex; however, there would be increased adaptation and monitoring of habitats to make sure objectives were met.

Similar to alternative A, invasive and noxious weeds (e.g., white top, Russian knapweed, Canada thistle, saltcedar, and

reed canarygrass) would be controlled using chemical, mechanical, or manual methods or through the use of livestock grazing. Efforts would be increased in sensitive habitats or where there was a risk of migration to neighboring private land (e.g., improve early detection, share equipment, and use innovative ideas). Steps would be taken to strengthen the fire program within the refuge complex. Through fire management planning, the Service would establish priority habitat burning needs based on historical and current fire-return intervals to more reliably achieve habitat objectives. The Service would pursue additional funding to protect human safety and welfare under the wildland-urban interface guidelines. Facilities that would increase Service obligations would be minimized where possible.



The Service would increase the use of prescribed fire.

Water Resources

The Service would achieve flexibility in water management on the refuge complex and would collaborate with others throughout the watershed as State regulations evolve. Changing the beneficial water use from irrigation to wildlife may be pursued. Ground water use would comply with new State ground water regulations through augmentation plans or by working with others (i.e., contracting with ground water management subdistricts). The Service would balance the need for habitat maintenance and visitor experiences.

The Service would pursue the sale of existing leased water to the Baca Grande Sanitation District. Water quality standards would be established, and monitoring would also be increased on the refuge complex.

Water infrastructure would be enhanced or replaced to meet habitat objectives. This could include shifting



A riparian area along the Rio Grande. A primary objective is to improve riparian areas to support a broader diversity of migratory birds.



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Environmental education programs would be added.

resources from one area to another to amplify positive benefits and allow for more flexibility.

The Service would continue to comply with mitigation requirements for wetlands replacement under the Closed Basin Project. In addition, the Service would pursue moving mitigation water from existing areas of use to other areas influenced by the project that continue to meet mitigation requirements and optimize migratory bird habitat needs.

Landscape Conservation and Protection and Wilderness Review

Any fee-title lands acquired as part of the San Luis Valley Conservation Area



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A researcher bands a southwestern willow flycatcher, an endangered species.

would be managed consistent with the habitat objectives.

Areas that contain quality wilderness values and where habitat, wildlife, and public safety (i.e., wildland-urban interface) objectives can be achieved would be recommended for wilderness protection.

Visitor Services

On all three refuges, the Service would use big game and small game hunting to provide both a recreation opportunity and to meet habitat objectives.

Access would be improved on Monte Vista and Alamosa Refuges and established on Baca Refuge (i.e., vehicles

or trails). Compatible means of access that facilitate the priority uses would be considered on all three refuges (i.e., cross-country skiing or bicycles). Portions of Baca Refuge would be seasonally opened for public uses except fishing. Limited fishing access would be allowed on Alamosa Refuge along the Rio Grande, including providing for youth events and walk-in access.

Some commercial opportunities could be considered (i.e., photography). The current trail system and the Monte Vista auto tour route would be expanded (seasonally open the original tour route on Monte Vista Refuge). An auto tour route would be built on Baca Refuge. Additional trails or viewing platforms would be considered to enhance viewing opportunities.

A new visitor center with staff offices would be built at Monte Vista Refuge. Refuge offices and a contact station would be constructed at Baca Refuge.

Partnerships and Refuge Operations

The Service would seek more staffing, particularly for Baca Refuge. To achieve management objectives and efficiencies in refuge operations, there would be increased emphasis on working with a variety of agencies and organizations. For example, the Service would collaborate with Colorado Department of Parks and Wildlife and other agencies to increase flexibility in managing elk.

Mineral developers would be asked to minimize their impacts on visitor experiences and locate facilities away from visitor access. The Service would increase fence maintenance and the management of invasive species, particularly along refuge boundaries.

Cultural Resources and Tribal Coordination

Actions would be similar to alternative A, plus there would be increased efforts toward protection of significant resources and/or elimination of structures that are not significant.

Research, Science, and Protection of the Physical Environment

The Service would increase monitoring efforts, in part, to understand the effects of climate change.



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Avocets are wading shorebirds often seen in playas and other shallow wetlands.

Alternative C—Habitat Restoration and Ecological Processes

The Service would take all feasible actions to restore or mimic, where necessary, ecological processes (the hydrologic system and the biological integrity, diversity, and health of habitat). Compatible wildlife-dependent public uses would be maintained or adapted in response to changes in area management. Partnerships would be broadened to assist in habitat or hydrograph (variances in flow and timing of water) restoration. Landscape conservation in the upper Rio Grande watershed would be promoted.

Habitat and Wildlife Management

Vegetative communities in the refuge complex would be restored to historical conditions (prior to 1850s) by mimicking the historical hydrograph of riparian areas and disturbance regimes in the uplands.

Upland habitats would be managed at a larger scale using prescribed fire and grazing and other tools, but small-grain production for sandhill cranes on Monte Vista Refuge would be eliminated.

The elk populations would be reduced on the refuge complex primarily through hunting and kept at a level that would foster recovery and improve the long-term health of native plant communities. The Service would explore the potential for wolf reintroduction for balancing wildlife populations. Similar to



Wilson's phalarope feed in shallow shoreline areas.

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American bison would be introduced on Baca Refuge.

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alternative B, habitats for native species or threatened, endangered, or other species of concern would also be improved (e.g., protect or restore riparian areas for southwestern willow flycatcher or introduce Rio Grande chub and suckers in appropriate areas).

The existing arrangement with The Nature Conservancy for bison management on former State lands would be phased out. Wild bison would be introduced on Baca Refuge as part of restoring ecological processes (mimic grazing disturbance) and would incorporate monitoring and adaptive management principles.

Similar to alternative B, the Service would intensify efforts at combating invasive plants. Steps would be taken to strengthen the fire program within the refuge complex using prescribed fire to restore historical plant communities or to mimic historical fire regimes.

Water Resources

The Service would manage water to restore the historical hydrograph with less focus on species habitat management or for providing wildlife viewing. Additional water rights would be pursued to allow flexibility in restoration efforts. Ground water use could be minimized or maximized to allow the system to follow historical wet and dry cycles. In some years, waterfowl brood water might not be available to meet life cycle needs for some species. Existing infrastructure could be removed or improved in order to maximize positive benefits and increase flexibility. The Service would pursue changing beneficial water use from irrigation to wildlife and selling existing leased water to the Baca Grande Sanitation District. Alterations to the Closed Basin Project would be proposed to improve natural water flows (e.g., additional culverts and siphons or altering county roads). Water quality monitoring would also be increased.

Landscape Conservation and Protection and Wilderness Review

Any fee-title lands acquired as part of the San Luis Valley Conservation Area would be managed consistent with the habitat objectives.



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By restoring the historical hydrologic regime, the life cycle needs of some species would not be met in some years or during dry cycles.



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Sandhill crane viewing areas could change depending on the year.



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Hunting would be used to achieve habitat objectives.

Areas that contain quality wilderness values with priority consideration for areas that promote connectivity and ecological resiliency would be recommended for protection. The Service would pursue acquisition of The Nature Conservancy lands within Baca Refuge to increase potential wilderness extent. Where National Park Service potential wilderness, designated wilderness, or wilderness study areas adjoin or are nearby, the Service would coordinate on management of these areas (e.g., fire, research, ungulate management, or other issues).

Visitor Services

Big game and small game hunting would be used on all three refuges, primarily to accomplish habitat and wildlife population objectives (e.g., target female elk or change distribution).

Other public use opportunities could change, depending on the habitat



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Areas that promote connectivity and ecological resiliency would be evaluated for wilderness potential.

management action. Some areas could be closed if they are not needed or if necessary for restoration. Current access would be evaluated on Alamosa and Monte Vista Refuges. If existing roads or trails are not needed or if these facilities fragment habitat, they could be removed. The Service could change viewing areas for sandhill cranes, depending on restoration efforts. Service participation in the Monte Vista crane festival could be adjusted, depending on changes in location and concentration of sandhill cranes. Fishing access (opportunities) would not be provided on Alamosa Refuge. On-site interpretation and environmental education programs would be provided on Alamosa

and Monte Vista Refuges, but the key message would be about restoration.

Except for limited hunting access to achieve management objectives, there would be no facilities or programs on Baca Refuge. For example, an auto tour route, nature trails, or other facilities like restrooms would not be established.

Partnerships and Refuge Operations

The Service would seek and increase partnerships with a variety of agencies, organizations, or universities to achieve management objectives for restoring ecological processes and improving the efficiency of overall refuge management operations. On Baca Refuge, current roads would be evaluated (Lexam and gravel roads), and roads that are not needed or are fragmenting habitat would be removed.

Cultural Resources and Tribal Coordinations

Actions would be similar to alternative B, except buildings that are not needed for refuge operations, are not significant culturally, and do not contribute toward restoration of ecological processes could be removed.

Research, Science, and Protection of the Physical Environment

Similar to alternative B, the Service would increase efforts in monitoring habitats and wildlife, particularly with respect to climate change and land or water protection.



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By restoring the historical hydrologic regime, ground water would be used more liberally during wet years.

Alternative D—Maximize Public Use Opportunities

The Service would manage existing wildlife and their habitats, and emphasize quality visitor experiences and compatible wildlife-dependent public uses. Partnerships that complement the Service's efforts to accommodate and provide for the priority public uses would be strengthened. Landscape conservation in the upper Rio Grande watershed would be promoted.

Habitat and Wildlife Management

Similar to alternative A, the Service would manage wetlands to highlight waterfowl production at Monte Vista and Alamosa Refuges. The Service would maximize wet meadow acreage to provide for a variety of waterbirds at Baca Refuge. Riparian and upland habitats would be conserved for migratory birds. Agricultural production of small grains for sandhill cranes would continue on Monte Vista Refuge, except grain production could also be used in strategic locations to facilitate the priority public uses. A key difference from alternative A is that the Service would improve public education and interpretation in talking about the role the refuge complex plays in the San Luis Valley and across the Refuge System.

The Service would offer opportunities for elk hunting and viewing in order to reduce or disperse populations.



There would be improved access across varied habitat types under alternative D.



Public education would be stressed in efforts to restore Rio Grande chub.

Eventually elk numbers would be managed at levels that would restore and foster the long-term health of native plant communities.

The Service would collaborate with other agencies for public access, law enforcement, and management of elk. Similar to alternative B, habitats for native species or threatened, endangered, or other species of concern would also be improved (e.g., riparian areas for southwestern willow flycatcher or reintroduction of Rio Grande chub and suckers in appropriate areas), but the Service would highlight the public education component in restoration efforts.

The existing arrangement with The Nature Conservancy for bison management on former State lands at Baca Refuge would be phased out. Similar to alternative C, a small bison herd would be introduced onto Baca Refuge; but wildlife viewing and interpretation opportunities would be emphasized.

Similar to alternative B, invasive and noxious weeds would be controlled using chemical, mechanical, or manual methods or through the use of livestock grazing; however, public education and awareness of the impacts that weeds have on native plant communities would be a key message for interpretation.

As under alternative A, prescribed fire would be used (levels are unpredictable and infrequent). There would be a concerted effort to talk with the public about the role of fire on the landscape and garner support for strengthening the fire program. Similar to alternative B, the Service would pursue additional funding to ensure protection of human safety under the wildland-urban interface guidelines, but would minimize facilities that could increase Service obligations on and off the site.

Water Resources

The Service would manage water similar to alternative B except that consideration would be given to also improving visitor experiences (i.e., making sure there is water in specific areas or at a specific time to enhance wildlife viewing). The spatial distribution of water would be managed to make the visitor's involvement richer. Additional water purchases for augmentation could also improve viewing opportunities. For example, ground water and surface water could be used to enhance areas used by sandhill cranes or provide additional prospects to see wildlife versus providing for life cycle needs of species less important to public uses.

Infrastructure would be improved in areas that are highly valued by visitors. Water quality monitoring would be increased, and collaboration with a citizen scientist group or with schools or universities would be sought out.



Improvements would be made to the environmental education program.

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Wildlife viewing opportunities would be improved.

Landscape Conservation and Protection and Wilderness Review

Similar to alternatives B and C, management of any acquired fee-title lands would be consistent with the habitat, wildlife, and public use objectives.

Areas on Baca Refuge that contain quality wilderness values while allowing for enhanced access opportunities for visitors, including easier game retrieval for hunters, would be recommended for protection.

Visitor Services

This alternative would provide for the widest variety of compatible wildlife-dependent recreation. Big game and small game hunting opportunities would be promoted (e.g., youth and accessible). Similar to alternative B, access would be expanded for all refuges including the opening of Baca Refuge for public uses. There would be additional access allowed to facilitate wildlife-dependent recreation (additional trails, viewing



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Baca Refuge in fall. The refuge has a rich cultural history that could be interpreted. Some buildings could be removed if they were not culturally significant.

blinds, restrooms, parking areas, and access points).

Visitor experience would take priority when designing or locating visitor access or using existing infrastructure. Interpretation and educational opportunities would be increased with additional staff and volunteers to support a wider range of appropriate and compatible programs and facilities. Fishing would be promoted on Alamosa Refuge. Commercial uses (i.e., photography or art groups) would be considered.

Partnerships and Refuge Operations

Actions would be similar to alternative B, except the Service would pursue partnerships that help secure funding for

priority public uses in addition to securing resources to protect, enhance, and interpret significant cultural resources.

Similar to alternative B, the Service would collaborate with mineral developers to place facilities away from public use facilities.

Cultural Resources and Tribal Coordinations

Actions would be similar to alternative B except there would be a greater emphasis on using higher education students or volunteers to survey high-potential areas with high potential for cultural resources. The Service would work with local and tribal educators to develop interpretive materials. In addition, the Service would remove buildings or other structures that are not needed for refuge operations, are not culturally significant, and do not contribute to the education and interpretation goals of the refuge complex. The Service would seek to collaborate with local historic groups to stabilize significant sites.

Research, Science, and Protection of the Physical Environment

Similar to alternative B, the Service would increase efforts to monitor habitats and wildlife, particularly with respect to understanding the local effects of climate change and its impacts on the resources of the San Luis Valley. How climate change affects the resources on the refuge complex would be incorporated into public use themes and messages.

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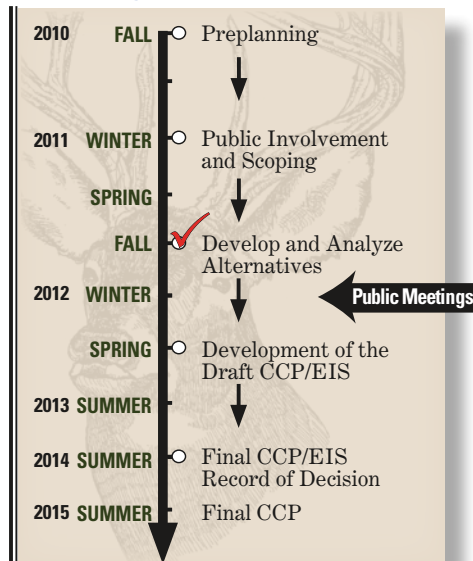
The beauty of the refuge complex provides for amazing photography.

Refuge Complex Facts

The refuge complex is a unique and ecologically important component of the Refuge System:

- Alamosa and Monte Vista National Wildlife Refuges were established primarily to support the Migratory Bird Treaty Act.
- Baca National Wildlife Refuge focuses on protecting the region's hydrology, upon which the unique sand dunes ecosystem of the area depends, and exceptional ecological, cultural, and wildlife resources. Congress authorized acquisition of land within Baca Refuge with passage of the Great Sand Dunes National Park and Preserve Act of 2000. Receiving widespread support, it was amended by Congress in 2008 to establish the purposes of the refuge. This act specifies that, among other requirements, the Service is to "restore, enhance, and maintain wetland, upland, riparian, and other habitats for native wildlife, plant, and fish species in the San Luis Valley."

Project Timeline

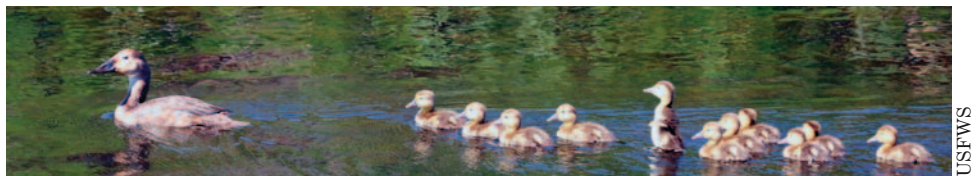


Contact Information

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Comprehensive Conservation Plan
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Tel: 303 / 236 4792
Fax: 303 / 236 4317

For project information, to get on the mailing list, or to send us an email:
www.fws.gov/alamosa/planning

For information about the refuge complex:
www.fws.gov/alamosa
Tel: 719 / 589 4021



Canvasback adult with chicks.



January 2012

San Luis Valley National Wildlife Refuge Complex
P.O. Box 25486
Denver, CO 80225-0486

RETURN SERVICE REQUESTED